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SPECIFICATION COVER SHEET

Client: Gowanus Canal Remedial
Design Group

Project: Gowanus Canal – 4th Street
Turning Basin – Dredging and
Capping

Project #: HPH106A

SPECIFICATION SECTION: 01 57 13 **TITLE:** TEMPORARY EROSION AND SEDIMENT
CONTROL

SPECIFICATION PREPARED BY:
(Specification Preparer, SP)

Signature

Name

Jessica Fears

Date

5/19/17

**SCOPE AND FORMAT CHECKED
BY:**
(Scope and Format Checker, SFC)

Signature

Name

Lauren Wellborn

Date

5/19/2017

**DETAILED REQUIREMENTS
CHECKED BY:**
(Detailed Requirements Checker, DRC)

Signature

Name

Darrell Nicholas

Date

5/19/17

APPROVED BY:
(Specification Approver, SA)

Signature

Name

J.F. Beech

Date

19 MAY 2017

Record of Revision (Number and initial all revisions)

Rev. No.	Reason	Date	By	Checked	Approval
0	TB4 Pilot Study Design – Issued for Bid	05/19/17	JMF	LSW	JFB

SECTION 01 57 13

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SECTION 01 57 13

TEMPORARY EROSION AND SEDIMENT CONTROL

PART 1 GENERAL

1.01 SUMMARY

- A. Work in this Section includes installation and maintenance of temporary erosion and sediment control measures.

1.02 RELATED SECTIONS, PLANS, AND DOCUMENTS

- A. Section 01 33 00 Submittals
- B. Section 01 35 29 Health, Safety and Emergency Response Requirements
- C. Section 01 55 29 Cap Material Staging and Transport
- D. Section 01 57 19 Temporary Environmental Controls
- E. Section 01 60 00 Product Requirements
- F. Contract Documents

1.03 REFERENCES

- A. New York State Department of Environmental Conservation (NYSDEC). November 2016, or most recent version. "New York State Standards and Specifications for Erosion and Sediment Control" ("NYS Standards and Specifications for E&SC").
- B. Geosyntec, 2017. "Stormwater Pollution Prevention Plan (SWPPP) for Construction Activities at Gowanus Canal Superfund Site." (Provided as Attachment K.1).

1.04 SUBMITTALS

- A. The Contractor shall submit the following to the Owner's Representative in accordance with Section 01 33 00 and the SWPPP:
 - 1. Manufacturer's product data to be used for sediment and erosion control measures;
 - 2. Signed Contractor Certification (provided as an attachment to the SWPPP);
 - 3. SWPPP Team Contact Information (provided as an attachment to the SWPPP);
 - 4. Weekly inspection forms (provided as an attachment to the SWPPP);

5. Certificates of erosion and sediment control training for Contractor personnel (*qualified inspector* and *trained contractor*) who will conduct SWPPP inspections; and
6. A copy of the compiled SWPPP binder, to be submitted at the end of the project and maintained as follows:
 - a. The Contractor shall compile and maintain onsite a project SWPPP binder containing a copy of the SWPPP and all relevant documentation as required by the SWPPP.
 - b. The Contractor shall maintain the SWPPP binder throughout the project and shall make it available for inspection by the Owner's Representative or Conservation District.

1.05 HEALTH AND SAFETY REQUIREMENTS

- A. The Contractor shall comply with environmental health and safety/training requirements in accordance with the approved Health and Safety Plan and Section 01 35 29.

PART 2 PRODUCTS

2.01 GENERAL

- A. Materials for sediment and erosion control measures shall be in accordance with this Section, the New York State Standards and Specifications for Erosion and Sediment Control (November 2016, or latest version), and the Sediment and Erosion Control (S&EC) Plan shown on the Construction Drawings and associated notes.
- B. Materials used to cover stockpiles shall be in accordance with Section 02 51 19.

2.02 SILT FENCE

- A. Furnish silt fence materials as needed in accordance with the criteria listed in Section 5 of the NYS Standards and Specifications for E&SC and as shown on the Construction Drawings.
 1. Silt Fence Fabric. The fabric shall meet the following specifications unless otherwise authorized by the Owner's Representative.

Fabric Properties	Minimum Acceptable Value	Test Method
Grab Tensile Strength (lbs)	110	ASTM D 4632

Fabric Properties	Minimum Acceptable Value	Test Method
Elongation at Failure (%)	20	ASTM D 4632
Mullen Burst Strength (PSI)	300	ASTM D 3786
Puncture Strength (lbs)	60	ASTM D 4833
Minimum Trapezoidal Tear Strength (lbs)	50	ASTM D 4533
Flow Through Rate (gal/ min/sf)	25	ASTM D 4491
Equivalent Opening Size	40-80	US Std Sieve ASTM D 4751
Minimum UV Residual (%)	70	ASTM D 4355

2. Fence Posts (for fabricated units). Fence post length shall be a minimum of 36 inches long. Wood posts shall be of sound quality hardwood with a minimum cross sectional area of 3.5 square inches. Steel posts shall be standard T and U section weighing not less than 1.00 pound per linear foot.
3. Wire Fence (for fabricated units). Wire fencing shall be a minimum 14 gage with a maximum 6-inch mesh opening, or as approved by the Owner's Representative.
4. Prefabricated Silt Fence. Prefabricated products are acceptable as long as substantive material specifications are met, as determined by the Owner's Representative.

2.03 FIBER ROLL

- A. Furnish fiber roll materials as needed in accordance with the criteria listed in Section 4 of the NYS Standards and Specifications for E&SC and as shown on the Construction Drawings.
 1. Fiber roll shall consist of coir (coconut fiber), straw, or excelsior encased in a netting of jute, nylon, or burlap.
 2. If located on asphalt, fiber rolls shall be anchored by tying them to a cinder block placed on the downslope side of the fiber roll. The anchor system shall limit movement of the fiber roll and trapped sediment. The Contractor may propose an alternate method for anchoring fiber rolls subject to approval by the Owner's Representative.

2.04 STABILIZED CONSTRUCTION ENTRANCE

- A. Inspect and maintain existing construction entrances to ensure compliance with criteria listed in Section 2 of the NYS Standards and Specifications for E&SC and details shown on the Construction Drawings.

1. **Aggregate.** Aggregate layer shall not be less than six (6) inches thick and shall consist of a matrix of 1 to 4 inch stone, or reclaimed or recycled concrete equivalent.
2. **Width.** Construction entrance shall be at least 12 feet wide but not less than the full width of points where ingress or egress occurs.
3. **Length.** Construction entrance shall not be less than 50 feet in length.
4. **Geotextile.** The area to be covered with aggregate shall be underlain with geotextile. Fabric shall be woven or nonwoven, consist of continuous chain polymeric filaments or yarns of polyester, and inert to commonly encountered chemicals and hydrocarbons. The fabric shall be rot resistant and conform to the following properties:

Fabric Properties³	Light Duty¹ Roads Grade Subgrade	Heavy Duty² Haul Roads Rough Graded	Test Method
Grab Tensile Strength (lbs)	200	220	ASTM D1682
Elongation at Failure (%)	50	60	ASTM D1682
Mullen Burst Strength (lbs)	190	430	ASTM D3786
Puncture Strength (lbs)	40	125	ASTM D751 Modified
Equivalent	40-80	40-80	US Std Sieve
Aggregate Depth	6	10	-
¹ Light Duty Road: Area sites that have been graded to subgrade and where most travel would be single axle vehicles and an occasional multi-axle truck. Acceptable materials are Trevira Spunbond 1115, Mirafi 100X, Typar 3401, or equivalent. ² Heavy Duty Road: Area sites with only rough grading, and where most travel would be multi-axle vehicles. Acceptable materials are Trevira Spunbond 1135, Mirafi 600X, or equivalent. ³ Fabrics not meeting these specifications may be used only when design procedure and supporting documentation are supplied to determine aggregate depth and fabric strength.			

2.05 STRAW BALE DIKE

- A Furnish straw bale dike materials as needed in accordance with the design criteria listed in Section 5 of the NYS Standards and Specifications for E&SC and as shown on the Construction Drawings.
1. **Bound straw bales.** Straw bales shall be placed on the contour and secured with re-bar, steel pickets, or 2" x 2" stakes.

2.06 EQUIPMENT

- A. Furnish equipment to perform sediment and erosion control measure installation and maintenance in accordance with this Section and the NYS Standards and Specifications for E&SC.

PART 3 EXECUTION

3.01 PREPARATION AND INSTALLATION

- A. Review the Construction Drawings and SWPPP.
- B. Sign the Contractor Certification and provide contact information as required by the SWPPP.
- C. Verify existing conditions as shown on the Construction Drawings prior to beginning Work in this Section.
- D. Inspect the condition of existing erosion and sediment control devices for compliance with requirements listed in this Section and shown on the Construction Drawings.
- E. Install sediment and erosion control measures prior to commencement of any other work activities in locations shown on the Construction Drawings in accordance with this Section.
- F. Inspect and certify newly installed erosion control measures in coordination with the Owner's Representative.
- G. Implement dust control in accordance with Section 01 57 19.
- H. Do not rely on the construction entrance to remove mud from vehicles and prevent off-site tracking. Restrict vehicles that enter the construction site from muddy areas or wash mud from them in a designated location approved by the Owner's Representative before allowing the vehicles to leave the Site.
- I. Maintain the construction entrance in a condition that will prevent tracking or flow of mud onto public rights-of-way.
- J. Immediately remove materials spilled, dropped, washed, or tracked onto roadways or into storm drains by scraping or sweeping.
- K. Under no circumstances shall water trucks be used to remove materials spilled, dropped, washed, or tracked onto roadways.

- L. Clean, maintain, repair, and replace sediment and erosion control measures for the duration of the Contract. Sediment that is removed from sediment and erosion control measures shall be disposed of in accordance with Section 02 51 19.
- M. At the end of the Contract, remove, transport and dispose of materials and debris associated with sediment and erosion controls in accordance with Section 02 51 19 and as directed by the Owner's Representative. Material shall be disposed or recycled in accordance with all local, state, and federal laws, codes, and ordinances.

3.02 INSPECTIONS

- A. The Contractor shall conduct a site inspection at least once every seven (7) calendar days. Inspection shall be performed by a *qualified inspector*, as defined in the Construction Drawings and documented in accordance with this Section and the SWPPP.
- B. The Contractor is responsible for conducting daily inspections of sediment and erosion control practices and pollution prevention measures being implemented within the active work area daily to ensure that they are being maintained in effective operating condition. Daily inspections shall be performed by a *trained contractor*, as defined in the Construction Drawings and documented in accordance with this Section and the SWPPP.

[END OF SECTION]